| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/750,602 | 12/28/2000 | Kishan B. Shah | 1150 | 6767 |

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| 5514 | 7590 | 05/26/2004 | | |

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

| EXAMINER |
|---|
| SUKHAPHADHANA, CHRISTOPHER T |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2625 | |

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 March 2004*.

2a)☒ This action is **FINAL**.          2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,3-15 and 21-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-15 and 21-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1.    The Amendment filed 12 March 2004 has been entered in full.

2.    Based on Applicant's amendments, the objection to the specification and claims, and

rejections under 35 USC 112 have been withdrawn. However, new rejections under 35 USC 112

are presented in this Action.

### *Drawings*

3.    The drawings were received on 12 March 2004.  These drawings are acceptable.

4.    Based on the replacement drawings, the objections to the drawings are withdrawn.

### *Response to Arguments*

5.    Applicant's arguments regarding the prior art rejections under Simard on page 13 of the

Amendment filed 12 March 2004 have been fully considered but they are not persuasive.

However, upon further consideration, the prior art rejections under Simard have been withdrawn.

6.    Applicant's arguments regarding the prior art rejections under Takaoka on page 13 of the

Amendment filed 12 March 2004 have been fully considered but they are not persuasive.

7.    In the last paragraph on page 13 of the Amendment, Applicants argue in substance:

   a.    **Takaoka does not disclose the selection of an initial condition.**

          The Examiner disagrees. Takaoka discloses in col 28, lines 8-22, a decision unit

104 that compares the entered degrees of recognition confidence C1-Cn and, on the basis

of the comparison, outputs a decision signal to the selector 105. The selector 105 then

selects a recognition result 1-n in accordance with this decision signal. Thus, the decision

unit 104 selects at least one set (language) from the plurality of sets (Japanese, English,

etc) of initial conditions based on each confidence level (C1-Cn) in said identifying step,

as recited in the claim.

### *Claim Objections*

8.      **Claims 3 and 15** are objected to because of the following informalities:  In **claim 3**,

consider adding "set" between "one" and "from" on line 2 of the claim. In **claim 3**, consider

adding "of" between "sets" on line 2 and "initial" on line 3 of the claim. In **claim 15**, consider

replacing "regognizing" on line 26 of the claim with --recognizing--. Appropriate correction is

required.

### *Claim Rejections - 35 USC § 112*

9.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

10.     **Claims 1, 4, and 13** are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

11.     **Claim 1** recites the limitation "the sets of individual conditions" in line 10 of the claim.

There is insufficient antecedent basis for this limitation in the claim. Consider replacing with --

the sets of initial conditions--.

12.     **Claim 4** recites the limitation "according to Claim 2" in line 1 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Consider replacing with --according

to Claim 1--.

13.     **Claim 13** recites the limitation "The computer program product" in line 1 of the claim.

There is insufficient antecedent basis for this limitation in the claim. Consider replacing with --

The computer program product according to Claim 8--.

*Claim Rejections - 35 USC § 102*

14.     The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

15.     As best understood in light of the rejections under 35 USC 112, **claims 1, 3-15, 21-23** are

rejected under 35 U.S.C. 102(e) as being anticipated by Takaoka (U.S. Patent 6,137,905,

previously cited, "Takaoka").

The applied reference has a common assignee with the instant application. Based upon

the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37

CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

inventor of this application and is thus not the invention "by another," or by an appropriate

showing under 37 CFR 1.131.

16.     In regards to **claim 1**, Takaoka discloses a method (Fig 24) of recognizing at least one

object in a digitized representation of an image, comprising the steps of: receiving (col 21, lines

50-57) the digitized representation of the image, the representation having a first resolution;

creating a reduced-resolution version of the image (col 23, lines 17-24) responsive to the

digitized representation of the image, the reduced-resolution version of the image having a

second resolution lower than the first resolution; providing a plurality of sets (col 22, lines 37-43,

languages) of initial conditions, the initial conditions including at least a condition for

recognition-processing of the image; for each of the sets of initial conditions, identifying a

confidence level (col 22, lines 44-55) of the recognition by recognition-processing the reduced

resolution version of the image having the second resolution; selecting at least one set (col 22,

lines 56-62, and col 28, lines 8-22) from the plurality of sets of initial conditions based on each

confidence level in said identifying step; and recognizing (col 22, lines 56-62) the objects

represented in the digitized representation of the image having the first resolution based on the

set of initial conditions selected in said selecting step.

Furthermore, Takaoka discloses in col 28, lines 8-22, a decision unit 104 that compares

the entered degrees of recognition confidence C1-Cn and, on the basis of the comparison, outputs

a decision signal to the selector 105. The selector 105 then selects a recognition result 1-n in

accordance with this decision signal. Thus, the decision unit 104 selects at least one set

(language) from the plurality of sets (Japanese, English, etc) of initial conditions based on each

confidence level (C1-Cn) in said identifying step, as recited in the claim.

17.    In regards to **claim 3**, Takaoka further discloses in col 27, line 13, said selecting step selecting one set from the plurality of sets of initial conditions based on a highest confidence level identified in said identifying step.

18.    In regards to **claim 4**, Takaoka further discloses in col 22, line 49, said selecting step selecting at least one set from a plurality of sets of initial conditions based on a confidence level exceeding a threshold.

19.    In regards to **claim 5**, Takaoka further discloses in col 23, lines 17-24, said creating step creates the reduced resolution version of the image by calculating an average of a plurality of pixels of the digitized representation of the image having the first resolution.

20.    In regards to **claim 6**, Takaoka further discloses in col 27, line 35, the method additionally comprising the step of recognizing at least one additional object represented in the digitized representation of the image, responsive to the value of at least one initial condition identified responsive to a confidence level exceeding a threshold.

21.    In regards to **claim 7**, Takaoka further discloses the method additionally comprising the steps of: attempting to recognize at least one additional object (col 22, lines 37-43, English language) represented in the digitized representation of the image responsive to the value of at least one initial condition identified, the attempting step comprising the step of producing a confidence level of the attempt (col 22, lines 44-55); and responsive to the confidence level of the attempt below a threshold (col 22, line 49): repeating the identifying step (col 28, lines 23-67); and recognizing the at least one object represented in the digitized representation of the image responsive to the value of each of the at least one initial condition identified during the repeating step (col 29, lines 4-17).

22.     In regards to **claims 8-14**, all the elements set forth in these claims have been addressed

in the argument of claims 1-7, respectively.

23.     In regards to **claim 15**, Takaoka discloses a system for recognizing objects, the system

comprising: a downsampler (col 21, lines 50-57) having an input for receiving a representation

of an image having a first resolution, the downsampler (col 23, lines 17-24) for producing and

providing at an output thereof a reduced-resolution version of the image responsive to the

representation of the image received at the downsampler input, the reduced resolution version of

the image having a second resolution lower than the first resolution; and a recognition engine

(col 22, lines 56-62) having a first input coupled to the downsampler output for receiving the

reduced-resolution version of the image and a second input for receiving the representation of the

image, the recognition engine for recognizing at least one object (col 22, lines 28-36, Japanese

language) in the digitized representation of the image by a method comprising the steps of:

providing a plurality of sets of initial conditions (col 22, lines 56-62, different languages), the

initial conditions including at least a condition for recognition-processing of the image; for each

of the sets of initial conditions, identifying a confidence level (col 22, lines 44-55) of recognition

by recognition-processing the reduced resolution version of the image having the second

resolution; selecting at least one set (col 22, lines 56-62, and col 28, lines 8-22) from the plurality

of sets of initial conditions based on each confidence level identified in said identifying step; and

recognizing the objects (col 22, lines 56-62, recognition result) represented in the digitized

representation of the image having the first resolution based on the set of initial conditions

selected in said selecting step.

24.    In regards to **claim 21**, Takaoka further discloses in col 28, lines 2-8 ("languages" as type of object), the set of initial conditions including at least one of a threshold grayscale value, a determination of skew correction and a determination of type of object.

25.    In regards to **claims 22 and 23**, all the additional limitations have been addressed in the argument of claim 26.

*Conclusion*

26.    **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
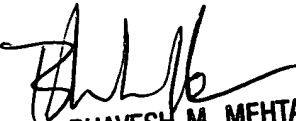
27.    Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher T. Sukhaphadhana whose telephone number is (703) 306-4148. The examiner can normally be reached on 9a-5p M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh M. Mehta can be reached on (703) 308-5246. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CTS

BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600